

*D 2*

*Done*

(b) contacting said antigen presenting cells of step (a) with monoclonal human T cells having a T cell receptor specific for the peptide encoded by said nucleic acid molecule(s) encoding one or more antigens which comprise said T cell epitope and known HLA allele for said T cells under conditions sufficient for said T cells to respond to the processed antigen;

(c) determining the level of said T cells' response to the processed antigen; and, if the vaccine composition exceeds a predetermined level of said T cells' response,

(d) assessing the vaccine composition in one or more human subjects.

*D 3*

7. (Twice Amended) The method of Claim 1 wherein the level of human T cell response to the processed antigen is indicated by the level of release of one or more cytokines or level of lysis of the human antigen presenting cells.

8. (Twice Amended) The method of Claim 1 wherein the level of human T cell response to the processed antigen is measured by the level of release of one or more cytokines or the level of stimulated formation of antibodies by B cells.

*D 4*

11. (Thrice Amended) A method for selecting one or more vaccine compositions from among a group consisting of two or more distinct vaccine compositions for assessment in a human, said vaccine compositions each comprising one or more nucleic acid molecules encoding one or more antigens which comprise the same T cell epitope, said method comprising the steps of:

(a) contacting human antigen presenting cells in culture with a vaccine composition selected from among said group of vaccine compositions, thereby, if one or more of the nucleic acid molecules encoding one or more antigens which comprise said T cell epitope are taken up and processed by said antigen presenting cells, producing one or more processed antigens;

(b) contacting said antigen presenting cells of step (a) with monoclonal human T cells under conditions sufficient for said T cells to respond to one or more of the processed antigens;

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- (c) determining the level of said T cells' response to one or more of the processed antigens;
- (d) repeating steps (a), (b) and (c) with each additional vaccine composition in the group; and
- (e) selecting at least one vaccine composition that exceeds a predetermined level of said T cells' response for assessment in one or more human subjects.

Please add New Claim 23.

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- 23. (New) A method for optimizing the T cell response against a T cell epitope comprising the steps of:
  - (a) contacting human antigen presenting cells in culture with two or more distinct vaccine compositions each having one or more nucleic acid molecules encoding one or more antigens which comprise the same specific T cell epitope under conditions suitable for said human antigen presenting cells to take up nucleic acid molecules and permit the human antigen presenting cells to produce one or more processed antigens;
  - (b) contacting the antigen presenting cells produced by step (a) with monoclonal human T cells having a T cell receptor specific for said specific T cell epitope and known HLA allele for said T cells under conditions sufficient for said T cells to respond to the processed antigen;
  - (c) determining the T cell response to the processed antigen, whereby the vaccine composition possessing an optimal response is selected;
  - (d) assessing the vaccine composition isolated in step (c) in one or more human subjects.

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REMARKS

Claim 1 has been amended to recite that the two or more distinct vaccine compositions in the group each having one or more nucleic acid molecules encoding one or more antigens which comprise a specific T cell epitope and that the defined peptide in step b is a peptide encoded by